

Project Documentation

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Assisted by:



Purpose of class

To discuss what to record in your **diary**, what to look for in reviewing the **contractor's daily** records, how to document events with **photos** and how **pay notes** should be recorded.



Project Documentation

- Government Diaries
- Contractor Daily Record of Const Ops
- Contractor Quality Report
- Photographs
- Pay notes





Government Diaries

Construction Manual Section 2-4





Government Diaries

- Maintaining a diary is **NOT** an option!
This is a required daily task and one of the things you are paid to do!
- No matter what system you use you need to keep your diary current and maintain the document's integrity.





Purpose of Diary

- To document the work progress
- To document the site conditions
- To document the Contractor's ability (or inability) to perform its work
- To provide valuable information necessary to accurately reconstruct the events of the project in preparation of a claim





Also keep in mind...

- Consistency!
 - Be consistent in recording of events, especially regarding potential claims.
- Failure to record an event
 - Once the responsibility of a diary is undertaken, failure to record an event carries the implication that the event did not happen, was insignificant, and threatens the credibility of the document.





What to include

- Date and Weather Conditions
 - Morning and Afternoon
- Work of Inspectors (PE Only)
 - A brief entry of duties
- Visitors
 - Names and Purpose of Visit
- Erosion Control & Environmental Concerns





What to Include

- Progress
 - As compared to schedule
 - Reasons why
- Safety Hazards & Corrective Measures
- Accidents
- Traffic Control & Signing



What to Include

- Conversations
 - Contractor employees
 - Subcontractors
 - Suppliers
- Regarding
 - Conduct
 - Changes
 - Interpretation of Specifications
 - Progress



What to Include

- Other information that may be needed for future disputes
 - Difficulties encountered and reasons why
 - Delays by contractor or Government
 - Improper use of equipment
 - Inefficient operations





What NOT to Include

- Information that should be in Contractor's Daily Report
- Conversations with PE, COEs, Legal and other Government People
- Field Measurements
- Blow by blow account of what you did on project or in office
- General or vague statements
- Derogatory or unprofessional statements





What about Recording the Contractor's Operations?

- Should not be done in Government Diary
- Can be done on “scratch” paper
- Once Contractor's Daily is checked – the “scratch” paper should be tossed
- Don't need to duplicate Contractor's Diary – just enough info to check





Diary Format

- Written – in ink
 - Bound books
 - Loose papers
- Typed
 - Must be printed and signed
- Recordings
 - Must be transcribed and signed
- Photos
 - include if it helps describe a condition





Timeliness

- Daily Diaries are Daily
- If typed – print out daily and sign





Reviewing Diaries

- COE should review at least the PE's diary – if not all inspectors.
- PE should review all diaries (Government or CI)





Include in Gov't Diary or Not?

- No Gravel Haul tonight because no areas are ready for Base Rock.
- Contractor Hauling Base Rock today. Took three tests from road. Mailed these along with one from yesterday to Vancouver.
- Checked subgrade stations 34+400 to 35+000. It was all within tolerance.





Include in Gov't Diary or Not?

- Spent two hours cleaning out Gov't vehicle – Jim didn't clean it before he left.
- Tom (tester) tried to take density tests at 78+200 culvert. He did not have the maximum density or optimum moisture content with him.





Include in Gov't Diary or Not?

- At 1:00 pm Josh (flagging subcontractor foreman) stopped me and told me that the flagging signs are not getting put up and it's out of his control. He said that he is appalled with the complete lack of communication with Prime contractor.





Include in Gov't Diary or Not?

- Test results (gradation) are not good. It appears as if test results are not being computed right.
- At 10:00 am the loader operator was stockpiling finished product and let the feeder at the crusher run out. This will cause inconsistency in the product. Crusher is producing 30101.





Include in Gov't Diary or Not?

- Contractor has 15 trucks hauling base rock today.
- Contractor Superintendent stated that clay is being encountered at about 7 feet in the NE corner of the pit. I looked at the area and agree that there is a clay layer at about 7 feet below surface.



Advice on How to make sure you are keeping a good diary

- After a week or so go back and review your diary using the Const. Manual as guidance.
- Keep a copy of the Const. Manual pages with you on the project.
- Ask the PE for feedback. They are the ones responsible for the project records.



Questions on Diaries?





Contractor's Daily Record of Construction Operations



What Should be in the Contractor's Daily Report

- Date/Day/Weather/Which contractor or subcontractor the report covers
- Equipment hours
- Labor hours
- What they were doing – meaningful description of the work



What Should be in the Contractor's Daily Report

- Equipment movement (in and out)
- Production – what did the contractor accomplish
- Comments – contractor's opportunity to notify us of things



Why is this information important?

- Helps establish what happened
 - Both parties are signing and agreeing
- Contemporaneous Document
 - At the time the work was done
 - Often pre-dispute



What is the information used for?

- On the project
 - To check contractor's progress
 - To assist in pricing out changes
 - Allows contractor to warn you of changes/concerns
 - To develop estimates of amount of work completed



What is the information used for?

- In Vancouver
 - Most often used in claim analysis and litigation support
 - It's a record of what both parties agreed to during the actual events
 - You will use it if you are in litigation to remember details



Do you have to use WFLHD 465?

- Subsection 153.05(b) states to use WFLHD 465 or an approved alternate.
- So what's an approved alternate...



One that includes...

- Date/Day/Weather/Which contractor or subcontractor the report covers
- Equipment hours
- Labor hours
- What they were doing – meaningful description of the work



One that includes...

- Equipment movement (in and out)
- Production – what did the contractor accomplish
- Comments – contractor's opportunity to notify us of things



Contractor Daily Reports

- What do you do if you disagree?
- Depending on the disagreement –
 - Correct the diary and return a copy to the contractor.
 - or -
 - Keep a copy and return the original to the contractor for correction. (Once you get the corrected original back – toss the copy) – or -
 - Sit down with the contractor to review and correct together.



Missing information

- What do you do if information is missing?
- Depending on the type of information and frequency –
 - Add the information and return a copy to the contractor. – or –
 - Keep a copy and return the original to the contractor for corrections. (Once you get the corrected original back – toss the copy) – or –
 - Sit down with the contractor to review and correct together.



How do you get the type of Daily you want?

- Make up an example and provide to the contractor
- Give the contractor a project stamp to use
- Fill out the top part of the diary
- Offer to review prior to submission to give comments



How do you get the type of Daily you want?

- First few times turn back a diary – review it in person with contractor
- Focus on diaries at the beginning of the project and when multiple operations start
- Spend time with contractor at beginning of project to review project expectations



How do you get the type of Daily you want?

- Relay to the prime contractor that you expect them to assist their subcontractors
- Focus on all new subcontractor diaries
- If contractor is willing, review their Foreman's report (if they have one) – it may work for their diary with minor modifications





Questions?





Contractor Quality Control

- Current Contracts - SCR 153.04
- Relatively new SCR



2007 Construction Staff Orientation – Project Documentation

CONTRACTOR QUALITY CONTROL PLAN WORKSHEET

Work Feature:

Bid items associated with the work:
Is a WFLHD 470 required for this feature of work?

Add pages (attachments) as necessary.

Yes

No

WFLHD FORM 471

Contractor Quality Control Actions

Who will perform the task?

What will be done to accomplish the task?

When and where will activities be performed and at what frequency?

Purpose and Benefit

| | Who will perform the task? | What will be done to accomplish the task? | When and where will activities be performed and at what frequency? | Purpose and Benefit |
|--|---|---|--|---|
| PREPARATORY QC ACTIVITY 1 | Independent; and with contractor staff review contract requirements, plans and specifications. | | | Assign QC individuals to be fully knowledgeable of the contract requirements. Use this individual to act as a resource for project staff to assist in determining requirements of the work. Knowledge of requirements will improve decision making for project staff allowing maximum performance and efficiency in completing work requirements. |
| PREPARATORY QC ACTIVITY 2 | Check and verify; submittals, plans and materials certifications for contract requirements and submit to FHWA. Provide statement and signature of verification. | | | Prompt and accurate review of submittal and certifications from fabricators and suppliers will ensure quick turnaround of FHWA acceptance. Repeated submittal transactions drain time and resources. |
| PREPARATORY QC ACTIVITY 3 | Check site conditions for constructability, including staging, disposal and storage areas. Identify potential quality control issues. Verify the materials delivered to the site conform to accepted materials certifications, submittals, plans and contract requirements. | | | A visual review of site conditions that analyzes constructability, staging, materials delivered and other operational factors could uncover some aspects of the work that have not been foreseen. Making a practice of this will increase productivity and ensure maximum efficiency during startup of operations. |
| PREPARATORY QC ACTIVITY 4 | Review construction staking to assure accuracy and sufficiency at each stage of construction. See Table 153-2 and Section 152 Construction Survey & Staking | | | Completing a systematic check of construction staking to ensure sufficiency and accuracy can save costly delays and expensive rework because of inaccurate survey. Develop a cross check method to ensure that layout and staking is correct and appropriate for the work. Develop an understanding of the information that will be conveyed by the staking. |
| PREPARATORY QC ACTIVITY 5 | Complete operational work plan. Provide brief written narrative of the work activity; describing methods, locations, crews, equipment and processes that will be used to complete the work. | | | Developing a work plan ahead of time is key to efficient performance. Sharing that knowledge in written form is instrumental in obtaining cost efficient performance. Sudden changes in work plan and methods due to oversight of essential requirements can be fatal to cost efficiency. |
| START-UP QC ACTIVITY 6 | Conduct pre-work meeting. Review contract requirements jointly with construction crew, foremen and FHWA personnel prior to beginning work. | | | Keeping the crew and the FHWA staff informed of methods, special considerations and expectations developed in the operational workplan is critical to a successful operation. Good communication should lessen misunderstood job requirements, inefficiency and re-work. |
| PRODUCTION QC ACTIVITY 7 | Verify that the ongoing construction will result in the end product meeting the contract requirements. Verify by inspecting, measuring and testing. See Table 153-1 & 153-2. Perform corrective actions. | | | The key to efficient production and acceptance is to ensure that adequate inspection and quality control has been performed prior to FHWA acceptance. Enabling your organization to perform quality control testing and inspection as the work is in the production stage allows adjustments to be made at an early stage. Rejection of completed work is costly and can be avoided by practicing good quality control. A structured approach to self-verification is beneficial. |
| PRODUCTION QC ACTIVITY 8 | Provide immediate presence to communicate status of work to FHWA personnel and contractor personnel for quality control issue resolution. | | | Close and prompt contact with FHWA is beneficial to solving construction issues during early stages of work. The sooner that issues are resolved the more efficient and productive work can be. It is in both the contractor's and the owner's interest to solve problems promptly as close to the issue as possible. Lengthy delays in finding the right personnel to resolve issues with cost time and waste resources. |
| COMPLETION QC ACTIVITY 9 | Verify completed work meets contract requirements. Implement Notification of completion of work as required. See 153.06 | | | Self-inspection of initial, production and followup work phases should be defined to ensure that work is meeting requirements as it is performed. This is an essential part of quality control to verify that the product meets contract requirements. It should include visual inspections, verification measurements and testing. When deficiencies are found, establish criteria for preventing recurrence. |
| Contractor Quality Control Manager Approval Signature | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <p>_____</p> <p>FHWA Acceptance Signature</p> </div> <div> <p>DATE _____</p> <p>DATE _____</p> </div> </div> | | | | |
| <p>QC Reports - As quality control activities (1) thru (9) are performed, provide reports of activities including discussions, reviews, inspections, measurements and testing results. Include deficiencies encountered and description of corrective actions completed. See 153.04(b)(1).</p> | | | | |



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FORM WFLHD 472 (02/000)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Western Federal Lands Highway Division
610 E. 5th St. Vancouver, Washington 98661

REGION SEVENTEEN
SCR 153.04

Project Name: _____ Project Number: _____

Date of inspection: _____ Weather: _____

Daily Quality Control and Assurance Report

Work reviewed/inspected: _____

Testing/measurement activities: _____

Deficiencies found: _____

Corrective action taken: _____

Narrative: _____

Pre-work/QCQA meeting topics/attendees: _____

I certify that the information contained in this record is accurate, and that all work documented herein complies with the requirements of the contract. Any exceptions to this certification are documented as a part of this record.

Reported by: _____

Quality Control Manager

Reviewed by: _____

FHWA Representative



153.04 states in part...

(b)(1) QC Reports – states “ Report Quality Control meetings, inspections, measurements, testing activities, corrective actions and discussions.... Documents findings such as deficiencies found in the work...describe corrective actions.....



So the report should ...

For each aspect of work, record the phase the work is in and document all quality control and assurance activities associated with this work.

For example:

*“Staking and surveying – production phase – spot checked some of the slope stakes “
Make sure information is specific. Where spot checked and what were findings
(attachment)*



The report should ...

Another example:

*“Erosion control installation – production phase – checked silt fence and straw bale installation – all installed per contract.”
Make sure specific locations and installations are described.*



The report should ...

List deficiencies and corrective actions taken or scheduled to be taken.

For example:

“Staking and surveying – production phase – spot checked some of the slope stakes and found four hubs between Stations 15+300 and 15+500 off between 30 mm and 70 mm in vertical. Surveyor went back and corrected this area and the rest of his work from this date.”



The report should ...

Another example of deficiencies and corrective action:

“Erosion control installation – production phase – checked silt fence and straw bale installation – “had laborers reinstall silt fence between 15+000 and 15+1100 per contract.”



The report should ...

Document meetings or discussions concerning quality control and assurance issues.

For example:

“During weekly meeting I brought up my concerns with the construction of the wall at 18+230 – the backfill operation is getting ahead of the compaction...”



The report should ...

Another example of meetings or discussions:

“All corrective work at the mitigation site is completed. Bill (FHWA) said he thought they were OK, but he’d look at it tomorrow.” What was the corrective work?



The report should ...

- Attach all test results from the day's operations.
- For example:

“Excavation/embankment – production – Completed compaction test (attached) for Stations 13+300 to 13+980. All passed.”



What to do if...

- information is missing?
- Depending on the type of information and frequency –
 - Add the information and return a copy to the contractor. – or –
 - Keep a copy and return the original to the contractor for corrections. (Once you get the corrected original back – toss the copy) – or –
 - Sit down with the contractor to review and correct together.



What to do if...

- you disagree with the Report?
- Depending on the disagreement –
 - Correct the report and return a copy to the contractor. – or –
 - Keep a copy and return the original to the contractor for correction. (Once you get the corrected original back – toss the copy) – or –
 - Sit down with the contractor to review and correct together.



How do you get the type of Quality Report you want?

- In a similar way as with the Contractor's Daily Record of Construction Operations
- Make up an example and provide to the contractor
- Offer to review prior to submission to give comments



How do you get the type of Quality Report you want?

- First few times you turn back a report – review it in person with contractor
- Focus on reports at the beginning of the project and when multiple operations start
- Spend time with contractor at beginning of project to review project expectations



Questions?





Photographs

Construction Manual Section 2-7





Photographs

- Purpose of Photographs
 - To document conditions and progress on the project
- Photos are used to...
 - Defend claims
 - Refresh your memory
 - Show others the work



What to take photos of

- Unusual conditions – flooding, slope failures, cave-ins, etc.
 - Prior to the condition being disturbed
- Actual conditions – when a Contractor alleges a differing site condition
- Unusual features
- Innovative construction methods





What to take photos of

- Areas of concern – for example, disturbances outside ROW, equipment arriving on project that hasn't been clean
- Work that is in dispute
- Accidents



What to take photos of

- Progress of work (photographic history)
 - Before construction starts
 - During major activities
 - After construction completed
 - From the same vantage point and of the same view





Before you take a photo...

Ask yourself

- Why am I taking this photo?
- How will it be used?
- Would a layperson unfamiliar with construction understand what you are depicting?

Make the photo meaningful



What to include with photo

- A photo is worth a thousand words – but it needs some info to make it usable...
 - Date (need to know what date the photo was taken)
 - What (need to know what the photo is of – location, direction looking, feature of photo)
 - May need reference scale (hard hat, person, etc.)
 - Who took the photo



Print versus Digital

- Either method is ok to use.
- Print – need to label the back of the photo
- Digital – need to label the image somehow – naming of file, grouping in folders and naming of folder, photo software
- Video – Same rules apply



Ways to reference a photo within the photo

- Duct tape with description or station
- Small white board with description written on it.
- Silt fence with stationing painted on it.
- If the product will be buried you can write on it with paint or Sharpie.



Examples



Examples



Examples



Examples



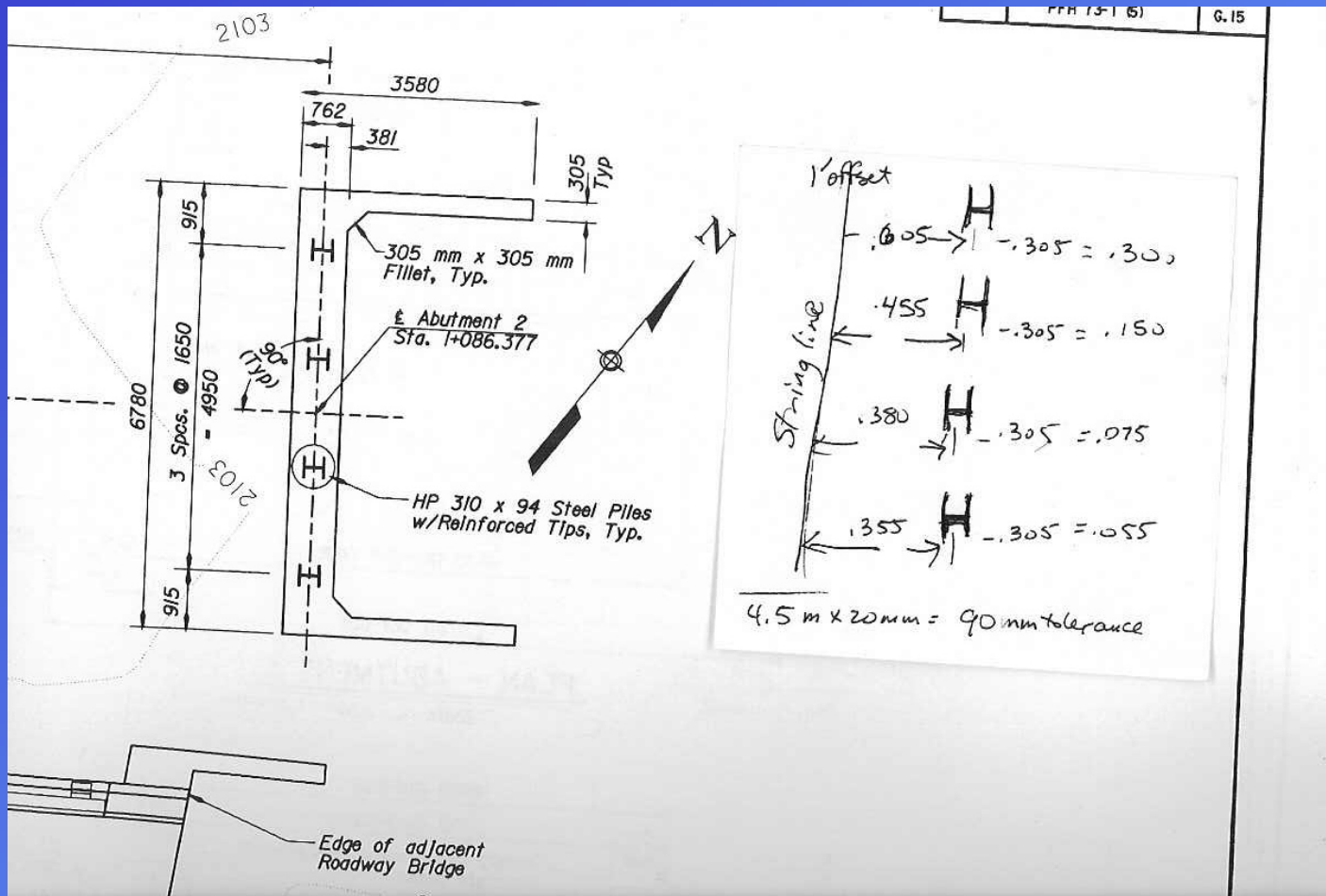
Examples



Examples



Examples



Examples



Examples



Examples



Examples





Pay notes

Section 109 of Contract

Field Note Samples Book and Section
8-1 of Construction Manual



Pay notes

- Purpose of pay notes - To record the measurement of the work
- The contract defines the method of measurement – the pay notes document the quantity.
- Both parties sign – it is an agreement of what work was done.





Pay notes

- What to include on all pay notes
 - Project name and number
 - Contract item number and name
 - Date the work was performed
 - Location of the work
 - Measured quantity (to the correct decimal)
 - Calculations made to arrive at the quantity
 - Supporting sketch and/or details as needed
 - Names of persons measuring the work



Pay notes

- The best examples are in the Field Note Samples book.
- FEQAT has updated the book recently. If you see areas of improvement notify FEQAT.



Forms and other Administrative Information

- Project Startup CD provide by Rich Buchholz.



Questions?





Last Question of the Day

One fifth of one fourth of one third of one half of 2400 equals?

1 3.14 5 10 20 50

